



# ***Joint Force Command and Control: Overview for NDIA Systems Engineering Conference***

***IS JWCA/JCS J6***

***22 October 02***



# Agenda

- **The View from the Department of Defense and Joint Staff:**
  - Extracts from “Transformation Pillars”, SECDEF comments, “Snowflakes”, and DPG/CJCS Guidance
- **Status Report: Development of JF C2 Operational Concept**
- **Issues:**
  - Organizing the SJF HQ
  - Executing the “Interoperability and Connectivity” Study
  - JF C2 Interoperability Funding shortfalls
- **Summary**



# Extracts from “Pillars of Transformation” in SECDEF’s Annual Report to the President and Congress – August 2002



- “Because U.S. forces operate **jointly** in conflict, they must train and operate together in peacetime so that they are ready to fight when needed. These **joint** forces must be scalable and task-organized into modular units that allow combatant commanders to draw on the appropriate forces to deter or defeat an adversary. They must be organized to enhance the speed of deployment, speed of employment and the speed of sustainment. The forces must be highly networked with **joint and multinational command and control**, and they must be better able to integrate into multinational operations than the forces of today.”
- “**Joint forces** will be employed to manage crises, forestall conflict, and conduct combat operations. They must be more agile, more lethal and maneuverable, survivable, and more readily deployed and employed in an integrated fashion.”
- “To be successful, operations will demand a flexible, reliable, and effective **joint command and control** architecture that provides the flexibility to maneuver, sustain, and protect U.S. forces across the battlefield in a timely manner. Such a joint command and control structure must reside not only at the **joint command**, but also extend down to the operational service components. The structure must be networked to ensure shared battlespace awareness. It must be supported by the appropriate doctrine, tactics, techniques, and procedures, as well as a highly trained operational force. Most importantly, it must develop and foster a **joint professional culture**, a requirement that presents a significant challenge to service and joint training and professional education programs.”
- “Coupled with experimentation, the development of **joint operational concepts and operational architectures** will drive material and non-material transformation solutions and establish standards for interoperability. New operational concepts—the end-to-end stream of activities that define how force elements, systems, organizations, and tactics combine to accomplish military tasks—are therefore critical to the transformation process and may even hold the promise of accomplishing U.S. aims at lower overall force structure and personnel levels.”



# SECDEF Quotes

- “The lesson of this war is that effectiveness in combat will depend heavily on **jointness**,” how well the different branches of our military can communicate and coordinate their efforts on the battlefield. And achieving **jointness** in wartime requires building that **jointness** in peacetime. We need to train like we fight and fight like we train, and too often, we don't.” (NDU, 31 January 2002)
- “Let it be said that combatant commanders ....they don't fight with Army systems or Navy systems or Air Force systems; what they want to do is fight with **joint systems**. They have to take all of the capabilities, not the ones that one service recommends, but all of them, and make them rational and coherent, and then be capable of putting power on a specific target in a specific way. So the task we're faced within the department is -- it would be wonderful if we could just simply say yes to all the services, "Make any recommendations you want, and resources are infinite, we don't have to worry about that," and then we can go about our business. But somebody has to make tough decisions, and in my view you have to make them earlier, rather than later.” (Senate Testimony, 21 May 2002)
- “We need faster, more agile, more balanced, more **interoperable joint forces**. We don't need services running off in four directions, and then, when the balloon goes up, wondering why they aren't as effective as a **joint force** as they could be. Or, even worse, why the phone doesn't ring, and they're left behind.” (Town Hall Meeting, 6 August 2002)

# “Snowflake – Interoperability and Connectivity”



- “Interoperability and Connectivity” – 20 June
  - To Mr Aldridge, USD (AT&L) “Have we defined what those words mean and how deep it must be if we are going to have joint operations? My impression is that each of the Services is still trying to get its own situational awareness based on its approach. JROC is supposedly doing this. I wonder if we should tell JFCOM to see that it gets done, and if it isn’t done, we should get reports on it.”
  - Impact: Draft memo to CJCS awaiting SECDEF signature. “Currently, we are not effectively structure to facilitate the ‘organizing, training, and equipping’ of joint capabilities. Therefore, I am directing that the Joint Staff lead the development of a plan, in conjunction with AT&L, C3I, the Services, JFCOM, and SOCOM, with options to address this issue.”



# “Snowflake – Concept of Operations”

- “Concept of Operations” – 12 August
  - To CJCS, “ I think you should move smartly ahead with respect to fashioning a joint concept of operations. It is important that it be written soon.
  - This should serve as a forcing function to sort out a lot of the issues that aren’t going to get resolved, given the current processes in the Department.
  - We need to find a way for Combatant Commanders to get engaged in the process. Certainly, Joint Forces Command has to play a major role. Indeed, you may want to subcontract the task to them.
  - I suggest that you have an outline or first draft back to me by October 15 and that we shoot to complete it no later than 1 February.
  - It should be based on the Defense Planning Guidance.”



# Review of DPG / CJCS Guidance

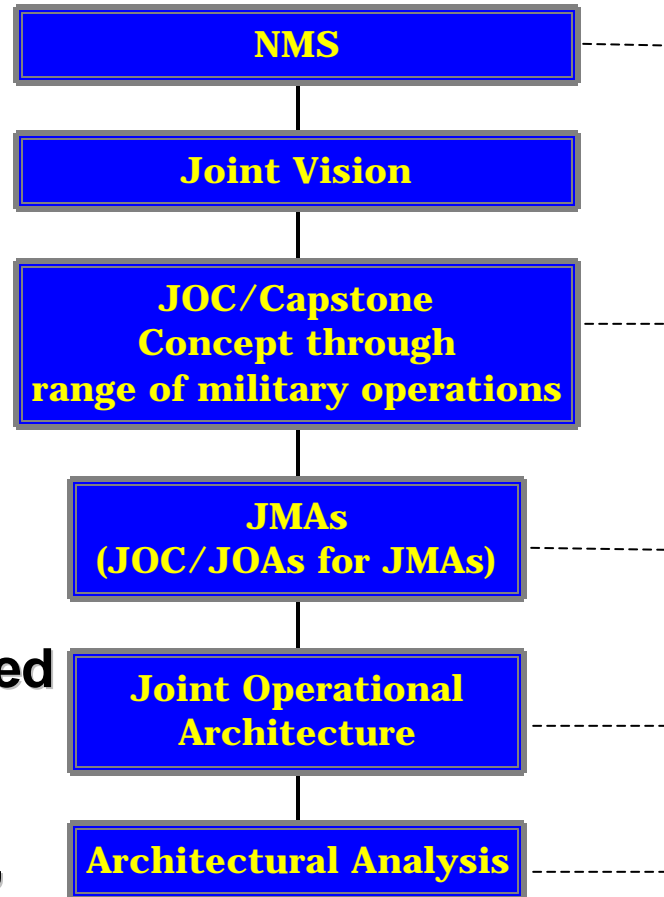
- DPG 04: “Regional Combatant Commanders will establish Standing Joint Force Headquarters by FY 2005 reflecting standards established by Joint Forces Command and incorporating lessons learned from Millennium Challenge ‘02”
- JE Guidance to CINC JFCOM - Nov ‘01:
  - FY 02: Execute Millennium Challenge ‘02. Examine results with developing SJF HQ in mind.
  - FY 03: Continue experimentation and finalize DOTMLPF recommendations for the implementation of the SJF HQ. Include Interoperability Technology Demonstration center.
  - FY 04: Plan and execute Olympic Challenge ‘04 with purpose of validating and verifying DOTMLPF recommendations for the common architectures, Joint TTPs, and SOPs for the SJF HQ.
  - Support each Combatant Commander in establishment of a SJF HQ within their region.
  - ...your first priority will be all activities related to achieving a Standing Joint Force Headquarters model.
- Comment to CINC JFCOM - Feb ‘02: “I will give you guidance on the development of the SJF HQ in the form of a JROC approved Operational Concept.”



# How JF C2 Fits in the Overarching Picture

Attributes track from governing documents down through concepts and into architectures

Policy/guidance provide testable metrics, incorporated at each stage (Integrated Planning Scenarios, Key Performance Parameters, industry standards)



Feedback built into the analysis, design and testing stages





# Roadwork and Homework:

## Preparing to Write the JF C2 Operational Concept

- Visits to all Regional Combatant Commands
  - Solicited their issues and concerns
- Frequent interactions with JFCOM
  - Monthly coordination meetings
  - Reps accompanied us on visits to Regional Combatant Commands
  - Multiple visits & close coord w/ Millennium Challenge 02
    - Engaged CINC, JTF Commander, and Senior Mentors
- Close coord with DJC2 program
  - Briefed both Senate and House Staffers
  - Drafted funding appeal
- Close coord with DISA
  - On both GCCS and Collaborative Tools
- Coordinating all aspects of JF C2 for JROC
  - Including both Operational and Tactical C2 programs and initiatives
- Major JF C2 Operational Concept Workshop – 27-29 August
  - All Regional Commands and Services represented

# Transforming C2: Refining and Implementing an Operational Concept for JF C2 in FY 2005 and Beyond



- **Chapters:**
  - Introduction and Methodology
  - Changing Operational Environment, Implications for JF C2, and JF C2 Characteristics
  - JF C2 Operational Concept
  - Process for Evolving JF C2
  - Implementing Elements of the JF C2 Concept by 2005
- **GEN Wilhelm is Senior Mentor**
- **Key:** Emplacing a process for rapidly evolving/"spiral developing" JF C2 and the SJF HQ in a way that builds consensus and momentum for change.
  - Involves both JFCOM and Regional Combatant Commands (incl NORTHCOM) in collaborative process; builds on lessons learned from MC 02
  - Monthly interactions and flag-level involvement; tie experimentation to exercises
  - Includes JROC oversight
- **Timeline:**
  - Refined at 27-29 August Workshop
  - Final draft being completed
  - Formal staffing begins o/a 12 Sept
  - Briefed during JRB/JROC trips in Sept / Oct
  - JROC approval in October
  - CJCS endorsement EOM October



# Organizing the SJF HQ

- **Background:**
  - All Regional Combatant Commands (incl NORTHCOM) identified organizational issues; specific requirements will likely differ
  - Millennium Challenge experimented with a cohesive, standing 55 person C2 element of military/civilian experts to augment a Service Component HQ- good lessons learned
- **Challenge:** For personnel to be assigned in FY 05, *specific needs must be identified before POM 05 build begins in January 03*
- **Approach:**
  - Coord SJF HQ organization study with JFCOM lead and Regional Combatant Command participation to determine initial form, function, and requirements for each command for implementation in FY 05.
  - Balance commonality with unique requirements.
  - Vet any additional manpower requirements through Manpower Validation Board process
  - Begin Sept 02, report to JROC by Dec 02

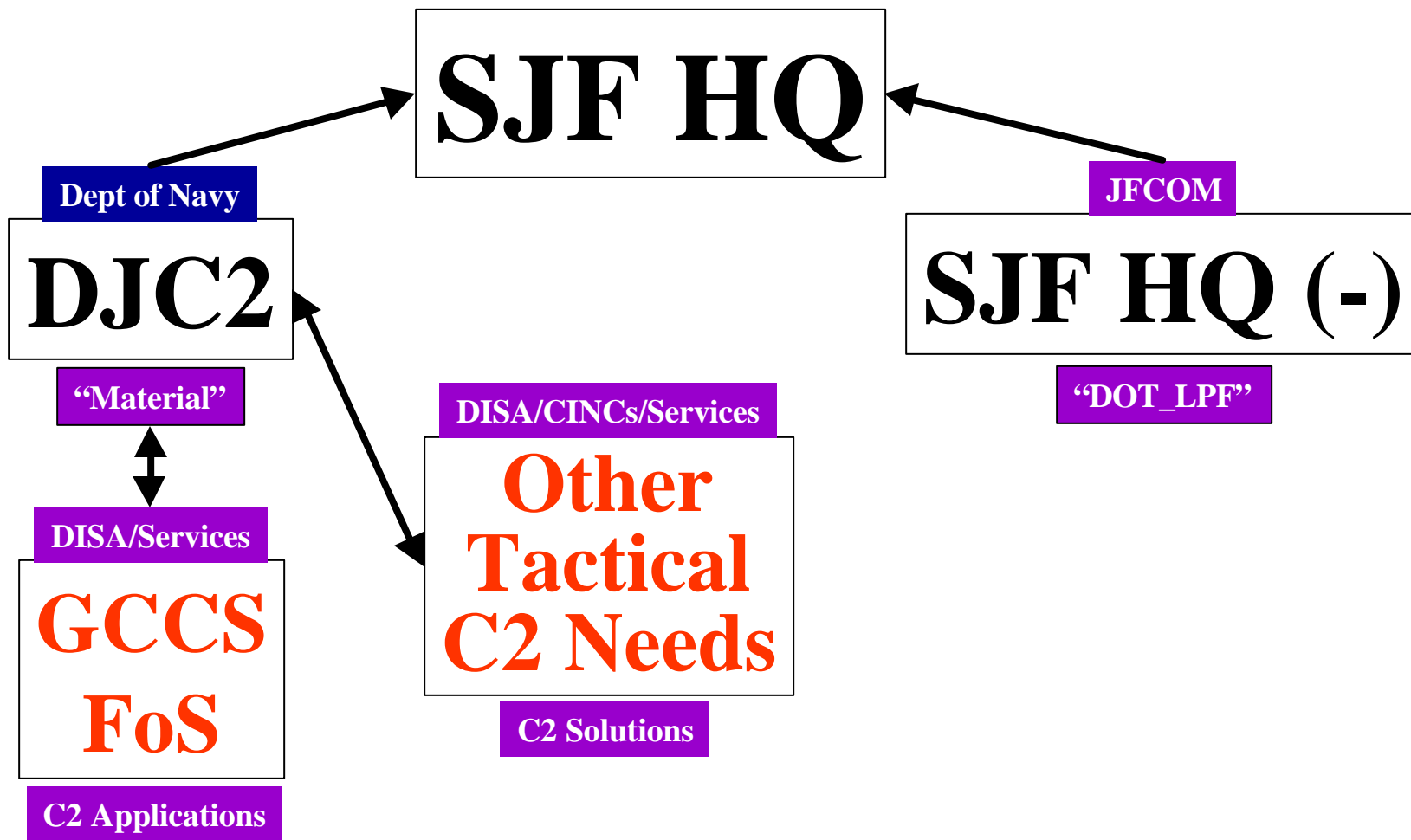


# Interoperability and Connectivity Study

- **SECDEF question:** “Have we defined what those words mean and how deep it must be if we are going to have joint operations?”
- **Draft Task:** Joint Staff - Develop a plan to address the issue of acquiring a joint command and control “system of systems” capability
- **Status:**
  - Joint Staff concurred as written.
  - JFCOM, SOCOM, and Service inputs received
  - With SECDEF, expect he will sign soon
- **Approach:** IS JWCA will lead with J6/J8 oversight...study will be staffed with C/S/A....will be complete by Nov/Dec timeframe



# A Framework for Addressing JF C2



# Methodology for Addressing C2 Interoperability



- Ideal endstate:
  - Strategic, operational/tactical assets and forces, US government agencies, coalition partners all “C2 interoperable” as and when appropriate
- Can’t fix everything - resource constraints and technology do not allow full interoperability - must prioritize:
  - Joint Warfighting is highest priority, followed by interagency and coalition interoperability
- Joint Warfighting Priorities (derived from several DPG-related sources)
  - Interoperability at JTF and component level including SJF HQ
  - Shared common picture to the lowest tactical levels
  - Establishment of viable, responsive sensor-to-shooter links that allow precise, timely, overwhelming application of joint combat power
  - Support for “reachback” and other joint warfighting infrastructure capabilities



# Thinking about JF C2 Interoperability

Programs Providing Reachback & Joint Warfighting Infrastructure

- Theater C4 Infrastructure
- MILSATCOM
- Transformational Comms
- MUOS
- GIG Bandwidth Expansion

Programs/ACTDs Providing Major Interoperability Improvements

- GCCS Enhancements
- COE/NCES
- DJC2
- FIOP Task 1
- JI&I recommendations (DEPSECDEF Tasker)

Regional Combatant Commander

JTF CC



## Operational Level Interoperability

**Enables:** Situational Awareness through COP  
**Impacts:** C2 of Forces  
Mission Planning  
**Characteristics:** GCCS-based  
Non-Real Time

Non-Real Time (\$)

Must synchronize improvements across all levels

Strategic

Operational

Service Component HQs

Service Component Forces

Tactical

Real Time (\$\$\$)

COMARFOR

COMAFFOR

COMNAVFOR

COMMARFOR

JSOTF

Coalition/Allied Partners

Squad

Aircraft

Ship

Squad

Squad

Unit

Interoperability Improvement Initiatives

- SIAP
- FIOP Task 2
- PE (Link 16 ground track)

Programs/ACTDs Providing Major Interoperability Improvements

- JTRS
- SIGP

## Tactical Level Interoperability

**Enables:** Battle Management through CTP  
**Impacts:** Application of Joint Combat Power  
**Characteristics:** Real Time  
Horizontal integration to lowest tactical level

GCCS-Provided Backbone

No Common Tactical C2 System



# Capability Options with Funding Shortfalls

Funding Values are approximate until FY04 POM data is finalized and reflect increases to expected FYDP 04-09 funding... they include Service implementation estimates

1	Currently Programmed C2 Interoperability	Marginal improvements in Blue and Red Force Tracking and collaboration - most fielded outside FYDP (PB03 funding)	As POM'd
1A	"Rob Peter to Pay Paul" Within C2 Community	Reprioritize C2 Interoperability Requirements within POM 04 Baseline	As POM'd
2	Improved Blue Force Tracking and Supporting Engineering/Infrastructure	Option 1 + Select Blue Force Tracking (BFT) & required supporting infrastructure (operational/tactical) & Transition Funds	As POM'd + approx \$ 1B (Incl. Implementation Costs of approx \$400M)
3	Improved Red Force Tracking & Targeting, Fires, Planning, Supporting Infrastructure	Option 2 + additional BFT, significant Red Force Tracking, collaboration initiatives, Fires Integration, Planning & required supporting infrastructure	As POM'd + approx \$ 2B (Incl. Implementation Costs of approx \$900M)
4	C2 Systems w/greatly improved Theater Infrastructure	Option 3 + Significant Theater Infrastructure enhancements	As POM'd + approx \$1.5 B (Incl. Implementation Costs)

Options 2,3 and 4 assume additional \$'s needed are not realigned from supporting Service C2 programs





# Results of JF C2 Funding Brief to JROC

- **JROC endorsed requirement for improvements to the following Joint Force C2 capabilities by FY 09:**
  - **Blue Force Tracking and Supporting Engineering/Infrastructure**
  - **Red Force Tracking and Targeting, Fires, Planning, and Supporting Infrastructure**
- **JROC declined to apportion funds from Service POMs to address those needs**
- **JF C2 will be addressed during FY 04 Program Review and in CJCS CPA**



# Summary

- **What we're doing...**
  - **Coordinating and Synchronizing JF C2 improvements for Regional Combatant Commands, JROC, and CJCS**
  - **Drafting JF C2 Operational Concept**
  - **Coordinating FY 04 Program Review funding for critical JF C2 initiatives**
  - **Working "Interoperability and Connectivity" Tasker**
  - **Coordinating JFCOM-led study of SJFHQ organization in Regional Combatant Commands**